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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/750,426	12/28/2000	Thomas J. Grimsley	XXT-073	7863

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EXAMINER
KAO, CHIH CHENG G

ART UNIT	PAPER NUMBER
2882	

DATE MAILED: 03/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/750,426	GRIMSLEY, THOMAS J.	
	Examiner	Art Unit	
	Chih-Cheng Glen Kao	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☒ Claim(s) *12 and 18-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 December 2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Fig. 1, #12

Note that this part of the drawing may be referring to Page 2, lines 23-24.

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:

Figs. 2A and 2C, #201

A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: On page 3, lines 21-22, "increased 20 production time" is recited. This objection may be obviated by deleting "20". Appropriate correction is required.

Claim Objections

4. Claim 12 is objected to because of the following informalities: Claim 12 recites the limitation "the inter-filter layer" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is uncertain which inter-filter layer that inter-filter layer refers to. This objection may be obviated by inserting - -first- - before "inter-filter layer" in line 2 of claim 12, in line 10 of claim 8, the two instances in line 13 of claim 8, in line 1 of claim 9, and line 1 of claim 10. For purposes of examination, the claim will be treated as such. Appropriate correction is required.

5. Claims 18-20 are objected to because of the following informalities: Claims 18-20 do not depend on an independent claim. Note that claims 18-20 depend on claim 19. This objection may be obviated by changing the dependency of all these claims to claim 17. For purposes of examination, the claims will be treated as such. Appropriate correction is required.

6. Claim 20 is objected to because of the following informalities: Claim 20 recites the limitation "the inter-filter layer" in line 2. There is insufficient antecedent basis for this limitation in the claim. It is uncertain which inter-filter layer that inter-filter layer refers to. This objection may be obviated by inserting - -first- - before "inter-filter layer" in line 2 of claim 20, in line 7 of claim 17, in line 8 of claim 17, in line 10 of claim 17, and line 1 of claim 18, and line 1 of claim 19. For purposes of examination, the claim will be treated as such. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: providing a photosensor. Providing a photosensor is a necessary step in order to make an electro-optical device. For purposes of examination, the Examiner will interpret the claim to include the following: providing a substrate with at least one photosensor and then applying a first filter layer above the substrate.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-3, 5-8, 11, 12, 15-17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. (US Patent 5135891) in view of Koizumi et al. (US Patent 5698892).

9. The following is with regards to claims 1-3 and 5-7.

With regards to claim 1, Ikeno et al. discloses a method and device of fabricating an electro-optical device (Title and Figs. 11A-11F) comprising providing a substrate (Fig. 5C, #1) with insertion of a first photosensor (Fig. 5A, #7), applying a first filter layer above a substrate (Fig. 5C, #27), applying an inter-filter layer over at least the first filter layer (Fig. 5C, #25), and applying a second filter layer over at least a portion of the inter-filter layer without removing the inter-filter layer (Fig. 5C, #28).

With regards to claim 2, Ikeno et al. further discloses applying a base layer before applying the first filter (Fig. 5C, #24).

With regards to claim 5, Ikeno et al. further discloses an inter-filter layer as an optically transmissive, film-forming polymer material (col. 5, lines 6-10 and 50).

With regards to claim 6, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

With regards to claim 7, Ikeno et al. further discloses applying the inter-filter layer on an area of the substrate not covered by the filter layer, thereby smoothing a top surface of the electro-optical device (Fig. 5C, #25).

However, Koizumi et al. does not disclose mounting in an image forming system.

With regards to claims 1 and 3, Koizumi et al. teaches mounting in an image forming system (col. 1, lines 12-25).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have mounting in an image forming system of Koizumi et al. with the method and device of Ikeno et al., since one would be motivated to mount it for forming images as implied from Koizumi et al. (col. 1, lines 12-25).

10. With regards to claims 8, 11, 12, 15-17, and 20, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

With regards to claims 8 and 17, Ikeno further discloses providing a substrate (Fig. 5C, #1) with insertion of a first and second photosensor (Fig. 5A, #7), applying a base layer on the substrate (Fig. 5C, #24), covering an area of the base layer overlaying the first photosensor with a patterned first filter layer preferentially allowing light having a wavelength within a first range to reach the first photosensor (Fig. 5C, #27), applying an inter-filter layer over at least the first filter layer (Fig. 5C, #25), and applying a patterned second filter layer over the second photosensor.

With regards to claim 11, Ikeno et al. further discloses the first and second filters with pigments (col. 5, lines 35-40).

With regards to claims 12, 15, and 20, Ikeno et al. further discloses applying a second inter-filter layer on the second filter and on the first inter-filter layer not covered by the second filter, thereby smoothing a second top surface (Fig. 5C, #26).

With regards to claim 16, Ikeno et al. further discloses a linear array chip (Fig. 7).

However, Ikeno et al. does not specifically disclose a second filter allowing light having a wavelength within a second range to reach the second photosensor.

With regards to claims 8 and 17, Koizumi et al. further teaches a second filter allowing light having a wavelength within a second range to reach the second photosensor (Fig. 11D, "B", "R", or "G").

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have different color ranges of Koizumi et al. with the suggested method and device of Ikeno et al. in view of Koizumi et al., since one would be motivated to in order to have the capability of providing multi-functions and greater processing of the image signal as implied from Koizumi et al. (col. 1, lines 24-27).

11. Claims 4, 9, 10, 13, 14, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeno et al. in view of Koizumi et al. as applied to claims 1 and 8 above, and further in view of McColgin et al. (US Patent 4553153).

12. With regards to claims 4, 9, 13, and 18, Ikeno et al. in view of Koizumi et al. suggests a method and device as recited above.

With regards to claims 9, 13, and 18, Ikeno et al. further discloses the inter-filter layer or base layer as translucent or clear (col. 5, lines 6-10 and 50).

However, Ikeno et al. does not specifically disclose an inter-filter layer as colorless.

With regards to claims 4, 9, 13, and 18, McColgin et al. teaches an inter-filter layer as colorless (Fig. 2, #16, col. 7, lines 20-30, and col. 8, lines 4-8).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the inter-filter layer as colorless of McColgin et al. with the suggested method and device of Ikeno et al. in view of Koizumi et al., since one would be motivated to have a colorless layer to have the filter portion of the color filter be the only portion

that is filtering as implied from McColgin et al. (col. 7, lines 20-30) rather than having two filters would create a combined and more calculations in figuring out what exactly will be filtered.

13. With regards to claims 10, 14, and 19, Ikeno et al. in view of Koizumi et al. suggests a method as recited above.

However, Ikeno et al. does not disclose an inter-filter layer with acrylic.

McColgin et al. teaches an inter-filter layer with acrylic (col. 1, lines 25-62).

It would have been obvious, to one having ordinary skill in the art at the time the invention was made, to have the inter-filter layer with acrylic of McColgin et al. with the suggested method of Ikeno et al. in view of Koizumi et al., since it would have been within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. One would be motivated to have use acrylic for its high planarization factors as implied from McColgin et al. (col. 5, lines 25-62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (703) 605-5298. The examiner can normally be reached on M - Th (8 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

gk
March 17, 2003

ROBERT H. KIM
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